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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/477,570	01/06/2000	DANIEL J. KNABENBAUER	AUS990884US1	9429

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EXAMINER

NGUYEN, KEVIN M

ART UNIT

PAPER NUMBER

2674

DATE MAILED: 09/04/2002

9

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/477,570

Applicant(s)

KNABENBAURER, DANIEL J.

Examiner

Kevin M. Nguyen

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 29 July 2002.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-49 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1, 2, 6-8, 19-26, 31-33 and 45-49 is/are rejected.
- 7) ☒ Claim(s) 3-5, 9-18, 27-30 and 34-44 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☒ The proposed drawing correction filed on 29 July 2002 is: a) ☒ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☒ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____.
- 4) ☐ Interview Summary (PTO-413) Paper No(s). _____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____.

DETAILED ACTION

Drawings

1. The corrected or substitute drawings were received on 7/29/2002. These drawings are approved.

Claim Rejections - 35 USC § 102

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

3. Claims 1, 19, 24 and 25 are rejected under 35 U.S.C. 102(b) as being anticipated by Krembs (US 3,585,443).

As to claims 1 and 25, Krembs teaches a three-dimensional gas display device wherein a plurality of gas discharge matrices are stacked forming a three-dimensional array. Each of the gas discharge matrices is formed by two planes of parallel glass enclosed wires 1 and 3, the glass enclosed wires of one plane running perpendicular to the other plane of glass enclosed wires 5 connecting to X-Y-Z display control and power supply 11 corresponding to the claimed a base coupled to the three dimensional matrix the base having electrical circuitry for powering and controlling the three dimensional matrix (col. 2, lines 26-28). In each intersection of each glass coated wires 1 with each enclosed wire 3 forms an electrode pair (col. 2, lines 14-17). Means are provided for applying a potential difference between the two wires intersecting at any point in the three dimensional array causing a continuous electric discharge at this point. By

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correctly selecting the intersecting points, a three dimensional design can be displayed corresponding to the claimed a three dimensional matrix of light emitting elements (abstract).

As to claim 19, Krembs teaches the glass-enclosed wires 1 and 3 of each two-dimensional gas discharge matrix 5 connecting to X-Y-Z display forming a plurality of pixels that are adjacent side by side are controlled by X-Y-Z display controller (controller system as claimed) and power supply 11 (col.2, lines 26-28).

As to claim 24, Krembs teaches the glass-enclosed wires 1 and 3 of each two-dimensional gas discharge matrix 5 which are arranged in X-Y-Z coordinates forming a cube shape (col. 2, lines 26-28).

Claim Rejections - 35 USC § 103

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

5. Claims 21-23 and 46-48 are rejected under 35 U.S.C. 103(a) as being unpatentable over Krembs in view of Marks (US 2,543,793).

As to claims 21-23 and 46-48, Krembs teaches all of the claimed limitation of claims 19, 1 and 25, except for "wherein the control system receives an input image coded in a three dimensional coordinate system, and wherein the input image is received from a television signal receiver." However, Marks teaches related three dimensional solid image screen comprising a plurality of cells (col. 3, lines 28-30), for

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use in conjunction with motion pictures, television, radar and the related arts (col. 1, lines 1-4). It would have been obvious to a person of ordinary skill in the art at the time of the invention to utilize the X-Y-Z glass wires driver circuits taught by Marks (col. 33, lines 30-33) for the X-Y-Z driver circuits disclosed in the three dimensional display system of Krembs because this would improve the quality of three dimensional pictures being displayed.

6. Claims 2, 6-8, 20, 26, 31-33, 45 and 49 are rejected under 35 U.S.C. 103(a) as being unpatentable over Krembs in view of Rand (US 4,790,629).

As to claims 2 and 26, Krembs teaches all of the claimed limitations of claims 1 and 25, except for "wherein the light emitting elements are pixels, and wherein each of the pixels has a red light emitting element, a green light emitting element, and a blue light emitting element." However, Rand teaches a three-dimensional shape that includes baffles (walls) 103 to form a series of cells 105, each of cell in the shape of triangles (figure 1B, col. 4, lines 27-35). The model of each cell creates a pleasing impression of three-dimensional display shape including the red, green, and blue light sources 115, 119, 121 (col. 5, lines 44-48). Since the display geometry of the three-dimensional display device affords the designer the ability to produce the arbitrary patterns of prior art system (col. 5, lines 27-29). Therefore, It would have been obvious to a person of ordinary skill in the art at the time of the invention to utilize the red, green, and blue light source 115, 119, 121 taught by Rand in Krembs' each display pixel because this would allow the use of multiple diffuser surfaces spaced at varying distances to further increase the dimensionality of the effect (col. 2, lines 65-68 of Rand).

As to claims 6, 7, and 31-33, Krembs teaches the glass-enclosed wires 1 and 3 of each two-dimensional gas discharge matrix 5 which are arranged in X-Y-Z coordinates forming substantially a plurality of pixels that are adjacent side by side (col. 2, lines 26-28).

As to claim 8, Krembs teaches the glass-enclosed wires 1 and 3 of each two-dimensional gas discharge matrix 5 connecting to X-Y-Z display forming a plurality of pixels that are adjacent side by side are controlled by X-Y-Z display controller and power supply 11 (col. 2, lines 26-28).

As to claims 20 and 45, Rand teaches the red, green, and blue light sources 115, 119, 121 that are controlled by a printed circuit card, connected to the display unit to conductors supplying power and control signals (col. 4, lines 50-53).

As to claim 49, Krembs teaches the glass-enclosed wires 1 and 3 of each two-dimensional gas discharge matrix 5 which are arranged in X-Y-Z coordinates forming a cube shape (col. 2, lines 26-28).

7. Claims 3-5, 9-18, 27-30 and 34-44 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Conclusion

8. Any inquiry concerning this communication or earlier communications from the examiner should be directed to **Kevin M. Nguyen** whose telephone number is **703-305-6209**. The examiner can normally be reached on MON-FRI from 9:00-5:00 with alternate Friday off.

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If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, **Richard A Hjerpe** can be reached on **703-305-4709**.

Any response to this action should be mailed to:

Commissioner of Patents and Trademarks

Washington, D.C. 20231


or faxed to:

(703) 872-9314 (for Technology Center 2600 only)

Hand-delivered response should be brought to Crystal Park II, 2121 Crystal Drive, Arlington, VA, Sixth floor (Receptionist).

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the Technology Center 2600 Customer Service Office whose telephone number is (703) 306-0377.

Kevin M. Nguyen
Examiner
Art Unit 2674


RICHARD HJERPE
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 2600